

Please replace all prior claims versions and listings with the following:

Listing of the Claims:

1. **(original)** A honeycomb filter, comprising:
an array of interconnecting porous walls which define an array of first channels and second channels, the first channels being bordered on their sides by the second channels and having a larger hydraulic diameter than the second channels, the first channels having a square cross-section, with corners of the first channels having a shape such that the thickness of the porous walls adjoining corners of the first channels is comparable to the thickness of the porous walls adjoining edges of the first and the second channels.
2. **(original)** The honeycomb filter of claim 1, wherein the shape includes a fillet.
3. **(original)** The honeycomb filter of claim 1, wherein the shape includes a bevel.
4. **(original)** The honeycomb filter of claim 1, wherein edges of diagonally-adjacent first channels are substantially aligned.
5. **(original)** The honeycomb filter of claim 1, wherein the second channels have a square cross-section.
6. **(original)** The honeycomb filter of claim 5, wherein a ratio of the hydraulic diameter of the first channels to the hydraulic diameter of the second channels is in a range from 1.1 to 2.0.
7. **(original)** The honeycomb filter of claim 6, wherein a ratio of the hydraulic diameter of the first channels to the hydraulic diameter of the second channels is in a range from 1.7 to 2.0.
8. **(original)** The honeycomb filter of claim 1, wherein the first channels are end-plugged at a first end of the honeycomb filter and the second channels are end-plugged at a second end of the honeycomb filter so that flow into the first channels pass through the porous walls and then out of the honeycomb filter through the second channels.

9. **(original)** A honeycomb filter, comprising:
an array of interconnecting porous walls which define an array of first channels having a square cross-section and second channels having a square cross-section, the first channels bordered on their edges by the second channels, the edges of the first channels being aligned with edges of the bordering second channels, the first channels having a larger hydraulic diameter than the second channels.
10. **(original)** The honeycomb filter of claim 9, wherein the first channels are positioned relative to the second channels such that the porous walls have a substantially uniform thickness.
11. **(original)** The honeycomb filter of claim 9, wherein corners of the first channels include fillets.
12. **(original)** The honeycomb filter of claim 9, wherein corners of the first channels include bevels.
13. **(original)** The honeycomb filter of claim 9, wherein a ratio of the hydraulic diameter of the first channels to the hydraulic diameter of the second channels is in a range from 1.1 to 2.0.
14. **(original)** The honeycomb filter of claim 13, wherein a ratio of the hydraulic diameter of the first channels to the hydraulic diameter of the second channels is in a range from 1.7 to 2.0.
15. **(original)** The honeycomb filter of claim 9, wherein the first channels are end-plugged at a first end of the honeycomb filter and the second channels are end-plugged at a second end of the honeycomb filter so that flow into the first channels pass through the porous walls and then out of the honeycomb filter through the second channels.
- 16.-20. **(canceled)**
21. **(new)** The honeycomb filter of claim 1, wherein the thickness of the porous walls adjoining the corners is in a range of about 0.8 to 1.2 times the thickness of the porous walls adjoining edges of the first and the second channels.

22. **(new)** A honeycomb filter, comprising:

an array of interconnecting porous walls which define an array of first channels and second channels, the first channels being bordered on their sides by the second channels and having a larger hydraulic diameter than the second channels, the first and second channels having a square cross-section, with corners of the first channels having a shape including a fillet or a bevel such that the thickness of the porous walls adjoining corners of the first channels is in a range of about 0.8 to 1.2 times the thickness of the porous walls adjoining edges of the first and the second channels and wherein a ratio of the hydraulic diameter of the first channels to the hydraulic diameter of the second channels is in a range from 1.1 to 2.0.